

## **Regional HIV/AIDS Epidemiologic Profile of Boston Health Service Region (HSR), Massachusetts: 2013**

### **Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data**

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2013, this resulted in the removal of 3,529 HIV/AIDS cases, of which 914 have died and 2,615 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

**Table 1. Total number of people reported with HIV infection or AIDS<sup>1</sup> by mortality status on December 31, 2012: Boston HSR, Massachusetts<sup>2</sup>**

	<b>N</b>	<b>%</b>
People Living with HIV/AIDS	5,830	57%
People Reported with HIV or AIDS who are Deceased	4,399	43%
<b>Total Number of People Reported with HIV Infection or AIDS</b>	<b>10,229</b>	<b>100%</b>

<sup>1</sup> Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/13

**Table 2. Average annual rate of HIV infection diagnosis from 2009 to 2011 and HIV/AIDS prevalence rate on 12/31/12<sup>1</sup>: Boston HSR, Massachusetts<sup>2</sup>**

<b>Average annual HIV diagnosis rate from 2009–2011</b>	<b>Average rate per 100,000</b>	<b>Average annual number of HIV diagnoses</b>
Boston HSR, MA	25.8	201.3
Massachusetts Total	10.3	664.7

  

<b>HIV/AIDS prevalence rate on 12/31/12</b>	<b>Rate per 100,000</b>	<b>Number of people living with HIV/AIDS</b>
Boston HSR, MA	746.7	5,830
Massachusetts Total	277.5	18,170

<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation.

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/13

**Table 3. People living with HIV/AIDS<sup>1</sup>, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year<sup>2</sup>: 2002–2011, Boston HSR, Massachusetts<sup>3</sup>**

<b>Year</b>	<b>HIV/AIDS Prevalence</b>	<b>Deaths among those with HIV/AIDS</b>	<b>Diagnosis of HIV Infection</b>
2002	4,320	114	343
2003	4,508	107	295
2004	4,681	88	261
2005	4,878	85	282
2006	5,022	88	232
2007	5,151	78	207
2008	5,282	78	209
2009	5,405	70	193
2010	5,538	69	202
2011	5,691	56	209

<sup>1</sup> Number of people living with HIV/AIDS on 12/31 of each year

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/13

**Table 4. People diagnosed with HIV infection from 2009–2011<sup>1</sup> and people living with HIV/AIDS on December 31, 2012 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Boston HSR, Massachusetts<sup>2</sup>**

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	457	76%	4,455	76%
Female	147	24%	1,375	24%
Place of Birth:	N	%	N	%
US	388	64%	3,957	68%
Puerto Rico/US Dependency <sup>3</sup>	29	5%	346	6%
Non-US	187	31%	1,527	26%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	194	32%	2,345	40%
Black (non-Hispanic)	257	43%	2,239	38%
Hispanic/Latino	134	22%	1,134	19%
Asian/Pacific Islander	14	2%	87	1%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	281	47%	2,788	48%
Injection Drug Use (IDU)	36	6%	781	13%
MSM/IDU	15	2%	206	4%
Heterosexual Sex	68	11%	731	13%
Other	6	1%	109	2%
Total Undetermined	198	33%	1,215	21%
• Presumed Heterosexual Sex <sup>4</sup>	71	12%	456	8%
• Undetermined <sup>5</sup>	127	21%	759	13%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2012	
Under 13	5	1%	8	<1%
13 to 19	16	3%	38	1%
20 to 24	62	10%	77	1%
25 to 29	75	12%	184	3%
30 to 34	72	12%	285	5%
35 to 39	85	14%	393	7%
40 to 44	85	14%	665	11%
45 to 49	84	14%	1,095	19%
50 to 54	56	9%	1,196	21%
55 to 59	37	6%	936	16%
60+	27	4%	953	16%
<b>Total<sup>6</sup></b>	<b>604</b>	<b>100%</b>	<b>5,830</b>	<b>100%</b>

<sup>1</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Ninety-eight percent of people diagnosed with HIV infection from 2009–2011 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>4</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>5</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>6</sup> Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

**Table 5. People living with HIV/AIDS on December 31, 2012 by gender and race/ethnicity: Boston HSR, Massachusetts<sup>1</sup>**

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	2,162	49%	183	13%
Black (non-Hispanic)	1,338	30%	901	66%
Hispanic/Latino	864	19%	270	20%
Asian/Pacific Islander	73	2%	14	1%
<b>Total<sup>2</sup></b>	<b>4,455</b>	<b>100%</b>	<b>1,375</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

**Table 6. People living with HIV/AIDS on December 31, 2012 by gender and exposure mode: Boston HSR, Massachusetts<sup>1</sup>**

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	2,788	63%	N/A	N/A
Injection drug use (IDU)	511	11%	270	20%
MSM/IDU	206	5%	N/A	N/A
Heterosexual sex	231	5%	500	36%
Other	56	1%	53	4%
Total Undetermined	663	15%	552	40%
• Presumed heterosexual sex <sup>2</sup>	N/A	N/A	456	33%
• Undetermined <sup>3</sup>	663	15%	96	7%
<b>Total</b>	<b>4,455</b>	<b>100%</b>	<b>1,375</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

**Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2002–2011<sup>2</sup>**

	Male		Female		Total
	N	%	N	%	
2002	245	71%	98	29%	343
2003	208	71%	87	29%	295
2004	200	77%	61	23%	261
2005	218	77%	64	23%	282
2006	185	80%	47	20%	232
2007	168	81%	39	19%	207
2008	172	82%	37	18%	209
2009	151	78%	42	22%	193
2010	147	73%	55	27%	202
2011	159	76%	50	24%	209

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

**Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2002–2011<sup>2</sup>**

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total <sup>3</sup>
	N	%	N	%	N	%	N
2002	112	33%	159	46%	67	20%	343
2003	101	34%	126	43%	65	22%	295
2004	91	35%	115	44%	51	20%	261
2005	102	36%	106	38%	70	25%	282
2006	91	39%	88	38%	49	21%	232
2007	84	41%	78	38%	38	18%	207
2008	88	42%	77	37%	39	19%	209
2009	67	35%	84	44%	41	21%	193
2010	71	35%	77	38%	46	23%	202
2011	56	27%	96	46%	47	22%	209

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Totals include Asian/Pacific Islander, American Indian/Alaskan Native individuals, and those of other or undetermined race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

**Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2002–2011<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	N
2002	203	59%	16	5%	124	36%	<b>343</b>
2003	186	63%	19	6%	90	31%	<b>295</b>
2004	169	65%	10	4%	82	31%	<b>261</b>
2005	182	65%	18	6%	82	29%	<b>282</b>
2006	142	61%	10	4%	80	34%	<b>232</b>
2007	135	65%	9	4%	63	30%	<b>207</b>
2008	138	66%	12	6%	59	28%	<b>209</b>
2009	127	66%	13	7%	53	27%	<b>193</b>
2010	125	62%	8	4%	69	34%	<b>202</b>
2011	136	65%	8	4%	65	31%	<b>209</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13

**Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2002–2011<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX <sup>3</sup>		Undeter- mined <sup>4</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2002	130	38%	42	12%	-- <sup>5</sup>	-- <sup>5</sup>	66	19%	-- <sup>5</sup>	-- <sup>5</sup>	26	8%	63	18%	<b>343</b>
2003	118	40%	34	12%	-- <sup>5</sup>	-- <sup>5</sup>	41	14%	-- <sup>5</sup>	-- <sup>5</sup>	36	12%	52	18%	<b>295</b>
2004	118	45%	26	10%	-- <sup>5</sup>	-- <sup>5</sup>	26	10%	-- <sup>5</sup>	-- <sup>5</sup>	35	13%	46	18%	<b>261</b>
2005	145	51%	23	8%	-- <sup>5</sup>	-- <sup>5</sup>	32	11%	-- <sup>5</sup>	-- <sup>5</sup>	25	9%	45	16%	<b>282</b>
2006	118	51%	16	7%	-- <sup>5</sup>	-- <sup>5</sup>	28	12%	-- <sup>5</sup>	-- <sup>5</sup>	23	10%	36	16%	<b>232</b>
2007	103	50%	23	11%	-- <sup>5</sup>	-- <sup>5</sup>	15	7%	-- <sup>5</sup>	-- <sup>5</sup>	13	6%	42	20%	<b>207</b>
2008	104	50%	12	6%	-- <sup>5</sup>	-- <sup>5</sup>	22	11%	-- <sup>5</sup>	-- <sup>5</sup>	15	7%	41	20%	<b>209</b>
2009	94	49%	10	5%	-- <sup>5</sup>	-- <sup>5</sup>	22	11%	-- <sup>5</sup>	-- <sup>5</sup>	20	10%	42	22%	<b>193</b>
2010	97	48%	15	7%	-- <sup>5</sup>	-- <sup>5</sup>	21	10%	-- <sup>5</sup>	-- <sup>5</sup>	28	14%	35	17%	<b>202</b>
2011	90	43%	11	5%	-- <sup>5</sup>	-- <sup>5</sup>	25	12%	-- <sup>5</sup>	-- <sup>5</sup>	23	11%	50	24%	<b>209</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13



**Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Boston HSR, Massachusetts<sup>1</sup>, 2002–2011<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2002	111	343	32%
2003	97	295	33%
2004	81	261	31%
2005	88	282	31%
2006	83	232	36%
2007	68	207	33%
2008	52	209	25%
2009	53	193	27%
2010	52	202	26%
2011	60	209	29%

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.  
Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/13

**Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Boston HSR, Massachusetts,<sup>1</sup> 2009–2011<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
<b>Gender:</b>	<b>N</b>	<b>N</b>	<b>%</b>
Male	123	457	27%
Female	42	147	29%
<b>Race/Ethnicity:</b>	<b>N</b>	<b>N</b>	<b>%</b>
White (non-Hispanic)	42	194	22%
Black (non-Hispanic)	87	257	34%
Hispanic/Latino	35	134	26%
Asian/Pacific Islander	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>
Other/Undetermined <sup>3</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>
<b>Place of Birth:</b>	<b>N</b>	<b>N</b>	<b>%</b>
US	94	388	24%
Puerto Rico/US Dependencies <sup>4</sup>	5	29	17%
Non-US	66	187	35%
<b>Total</b>	<b>165</b>	<b>604</b>	<b>27%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2009–2011 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/13